From: Lottig, Justin
Sent: Friday, January 07, 2011 11:13 AM
To: matthew.kurano@doh.hawaii.gov; Tanimoto, Jamie
Cc: Whelan, Joseph; Frey, Jesse
Subject: Request for Information from DOH CWB

As requested verbally by the State of Hawaii Department of Health Clean Water Branch (CWB) during a site inspection on December 23, 2010 Waste Management is providing the following information:

CWB Request: When we collect samples for the discharge associated with the December 19, 2010 storm event, the CWB requested that in addition to our normally required analyte list, we should add a bacterial analysis and a major cation and anion analysis.

WM Response: WM contacted our stormwater sampling consultant and they were able to collect samples the evening of December 23, 2010. The consultant was not able to obtain the sterilized sample containers required for bacteria analysis that evening and the next morning the discharge had stopped. However, a sample was collected for major cation and anion analysis. Those results are included with this email in table format.

CWB Request: Please provide the rainfall data from the December 19 storm event.

WM Response: Rainfall data are attached.

CWB Request: Please provide an approximation of the volume of water that was retained in the pond that formed in the cell E6 area during the rain event.

WM Response: Based on the high water elevation (approximately 432 ft. amsl.) and the waste grades, WM believes there was approximately 7.5 million gallons of water accumulated in the Cell E6 area.

CWB Request: Please report the results of the stormwater samples to the CWB verbally when you receive them and follow with a written report summarizing the results and the storm timeline.

WM Response: Results were provided verbally to Jamie Tanimoto on January 5, 2011 shortly after they were received from the laboratory. A written report is expected to be submitted to the CWB within the next two weeks and this will include laboratory reports as you have requested.

CWB Request: Please provide a diagram of the Cell E6 including the riser pipes for the leachate sump.

WM Response: An as-built survey of the operations layer of cell E6 is attached for your records.

Justin H. Lottig
Environmental Protection Manager
Waste Management of Hawaii
92-460 Farrington Highway
Kapolei, HI 96707
808.668.2985

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MONTHLY CLIMATOLOGICAL SUMMARY for DEC. 2010

NAME: WGSLOffi CITY: Kapolei STATE: Hawaii
ELEV: 80 ft LAT: 21° 24' 00" N LONG: 158° 06' 00" W

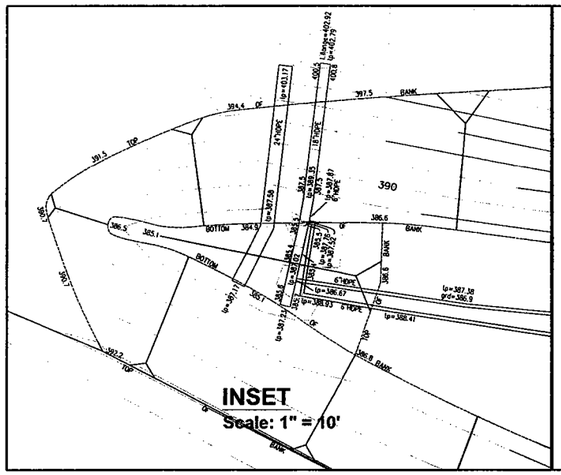
TEMPERATURE (°F), RAIN (in), WIND SPEED (mph)

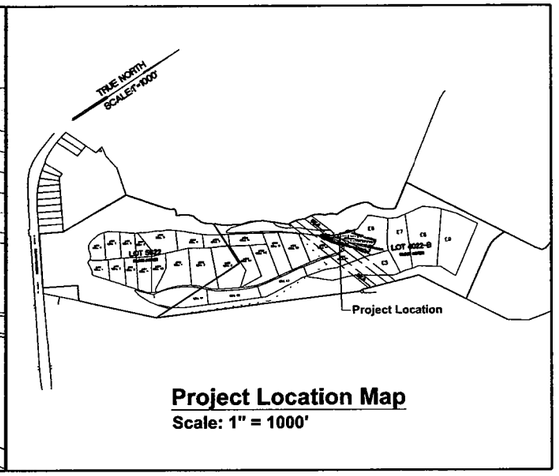
DAY	MEAN TEMP	HIGH	TIME	LOW	TIME	HEAT DEG DAYS	COOL DEG DAYS	RAIN	AVG WIND SPEED	HIGH	TIME	DOM DIR
1	77.3	84.4	1:30p	72.1	3:00a	0.0	12.3	0.31	10.8	27.0	5:00p	ENE
2	77.6	83.8	1:30p	74.1	2:00a	0.0	12.6	0.00	11.7	30.0	10:00a	ENE
3	76.1	82.7	2:30p	72.0	2:30a	0.0	11.1	0.00	16.4	36.0	8:00a	ENE
4	76.5	83.8	2:00p	71.8	12:00m	0.0	11.5	0.00	10.2	31.0	12:00p	ENE
5	75.7	84.9	1:00p	69.6	2:30a	0.0	10.7	0.00	8.9	33.0	1:00p	ENE
6	74.7	82.1	1:30p	69.4	6:30a	0.0	9.7	0.00	4.3	15.0	12:30p	NNE
7	74.1	80.6	1:00p	66.6	2:30a	0.0	9.1	0.00	3.1	13.0	1:00p	NE
8	74.9	81.7	12:00p	68.8	5:30a	0.0	9.9	0.00	4.4	15.0	11:00p	NE
9	76.7	81.8	12:00p	66.8	12:00m	0.0	11.7	0.69	8.5	31.0	11:00p	SE
10	69.9	73.8	10:30p	66.5	4:30a	0.0	4.9	0.83	5.5	32.0	2:00p	ENE
11	73.9	80.2	4:00p	67.4	7:30a	0.0	8.9	0.68	5.3	25.0	5:30p	NE
12	75.4	80.1	3:00p	70.8	3:30a	0.0	10.4	0.01	5.1	19.0	6:30a	NE
13	77.1	84.4	12:30p	70.0	6:00a	0.0	12.1	0.00	5.0	18.0	12:30p	ENE
14	77.2	84.6	11:30a	72.8	5:00a	0.0	12.2	0.00	3.8	18.0	11:30a	NE
15	76.7	84.3	3:00p	70.1	4:00a	0.0	11.7	0.00	5.5	24.0	10:30a	NE
16	75.6	81.5	2:00p	70.2	7:30a	0.0	10.6	0.00	4.1	14.0	9:30a	NE
17	75.7	82.7	12:30p	69.0	2:30a	0.0	10.7	0.00	4.5	18.0	12:00p	NE
18	76.0	81.1	12:00p	71.8	5:30a	0.0	11.0	0.00	6.0	18.0	10:30p	ENE
19	72.0	75.3	12:30a	69.3	11:30a	0.0	7.0	5.38	7.1	24.0	5:00p	ENE
20	74.8	77.3	3:00p	73.5	4:00a	0.0	9.8	0.14	4.5	16.0	3:00a	ENE
21	75.2	81.5	2:00p	71.9	9:00a	0.0	10.2	0.43	4.8	14.0	7:30a	ENE
22	75.8	81.7	12:30p	71.3	6:30a	0.0	10.8	0.00	3.3	12.0	12:30a	NE
23	75.5	80.7	2:00p	71.7	7:30a	0.0	10.5	0.20	3.0	13.0	3:30p	ENE
24	76.3	82.7	12:30p	72.0	3:00a	0.0	11.3	0.00	3.2	14.0	12:30p	NE
25	76.5	82.5	12:00p	73.4	9:30p	0.0	11.5	0.11	5.3	18.0	12:30p	ENE
26	75.0	80.4	3:30p	70.8	5:30a	0.0	10.0	0.87	6.1	24.0	1:30a	ESE
27	75.1	78.6	2:30p	70.4	9:00p	0.0	10.1	2.24	5.7	27.0	5:30p	ESE
28	74.3	75.9	3:00a	71.0	12:30a	0.0	3.5	0.01	5.5	25.0	9:00a	ENE
29												
30												
31												
	75.4	84.9	5	66.5	10	0.0	285.8	11.90	6.1	36.0	3	ENE

Max >= 90.0: 0
Max <= 32.0: 0
Min <= 32.0: 0
Min <= 0.0: 0
Max Rain: 5.38 ON 12/19/10
Days of Rain: 11 (>.01 in) 11 (>.1 in) 2 (>1 in)
Heat Base: 65.0 Cool Base: 65.0 Method: Integration

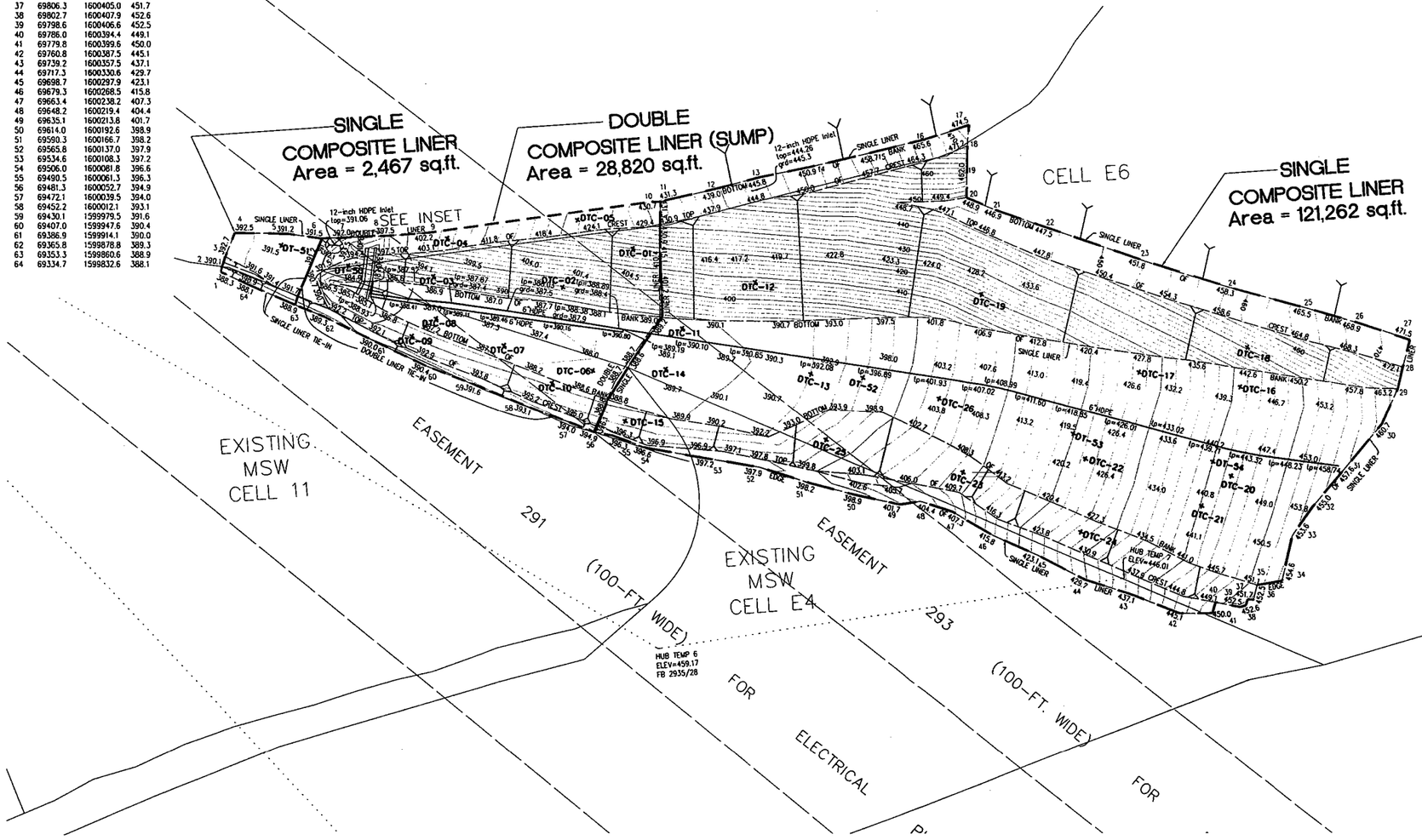
COORDINATES OF
LINER BOUNDARY

PTNO	NORTHING	EASTING	ELEVATION
1	69321.6	1599812.1	388.3
2	69324.7	1599809.2	390.1
3	69330.3	1599804.7	392.7
4	69345.3	1599794.1	392.5
5	69376.8	1599815.5	391.2
6	69394.8	1599831.2	391.5
7	69402.1	1599835.4	392.0
8	69433.5	1599854.1	397.5
9	69459.3	1599868.3	402.2
10	69604.5	1599936.3	430.7
11	69609.9	1599939.4	431.3
12	69646.5	1599952.7	439.0
13	69678.5	1599963.3	445.8
14	69712.3	1599976.5	450.9
15	69754.3	1599991.6	458.7
16	69790.8	1600004.1	465.6
17	69823.4	1600012.8	474.5
18	69814.3	1600024.7	471.2
19	69805.3	1600038.0	462.0
20	69793.8	1600055.5	448.9
21	69807.5	1600075.5	446.9
22	69831.8	1600106.4	447.5
23	69874.3	1600161.0	451.8
24	69916.3	1600211.7	458.3
25	69954.3	1600254.0	465.5
26	69978.2	1600281.8	468.9
27	70002.4	1600312.0	471.5
28	69987.6	1600325.6	472.1
29	69976.4	1600336.6	463.2
30	69953.1	1600351.7	460.7
31	69913.8	1600364.3	457.6
32	69880.5	1600374.6	455.0
33	69857.3	1600384.2	453.6
34	69833.9	1600407.2	454.6
35	69817.3	1600400.1	451.1
36	69809.4	1600407.5	452.5
37	69806.3	1600405.0	451.7
38	69802.7	1600407.9	452.6
39	69798.6	1600406.6	452.5
40	69786.0	1600394.4	449.1
41	69779.8	1600399.6	450.0
42	69760.8	1600387.5	445.1
43	69739.2	1600357.5	437.1
44	69717.3	1600330.6	429.7
45	69698.7	1600297.9	423.1
46	69679.3	1600268.5	415.8
47	69663.4	1600238.2	407.3
48	69648.2	1600219.4	404.4
49	69635.1	1600213.8	401.7
50	69614.0	1600192.6	398.9
51	69590.3	1600166.7	398.2
52	69565.8	1600137.0	397.9
53	69534.6	1600108.3	397.2
54	69506.0	1600081.8	396.6
55	69490.5	1600061.3	396.3
56	69481.3	1600052.7	394.9
57	69472.1	1600039.5	394.0
58	69452.2	1600012.1	393.1
59	69430.1	1599979.5	391.6
60	69407.0	1599947.6	390.4
61	69386.9	1599914.1	390.0
62	69365.8	1599878.8	389.3
63	69353.3	1599860.6	388.9
64	69334.7	1599832.6	388.1





Project Location Map
Scale: 1" = 1000'



LEGEND

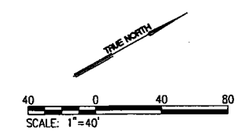
DT-# DENSITY TEST LOCATION – TRENCH BACKFILL
DTC-# DENSITY TEST LOCATION – SOIL CUSHION LAYER

NOTES:

1) ORIGIN OF COORDINATES: COORDINATES REFERRED TO HAWAII STATE PLANE COORDINATE GRID SYSTEM, NAD 83 ZONE III
2) ORIGIN OF BENCH MARKS: BENCH MARKS REFERRED TO USC&GS BRASS DISK D-14, ELEVATION = 30.335 MEAN SEA LEVEL
3) TEST LOCATIONS ARE APPROXIMATE.

SOURCE:

PARK ENGINEERING
OCTOBER 1, 2010
SEPTEMBER 30, 2010
SEPTEMBER 10, 2010
DATE: AUGUST 30, 2010
FIELD BOOK NO. 2935/21,25



Drawing 1
MSW Cell E6 (Partial)
Limits of Liner System and Liner Subgrade Topography

AECOM

Waste Management of Hawaii
Waimanalo Gulch Sanitary Landfill
Kapolei, Oahu, Hawaii

WMH 000303

Waimanalo Gulch Sanitary Landfill Storm water Monitoring
Culvert Entrance Compliance Monitoring Stations , 23 December 2010 Discharge Event
Laboratory **Final** Data Summary Table

Method	Analyte	Unit	Screening Criteria	EPA Benchmark	CULVERT
1664A	HEM (Oil and Grease)	mg/L	15	15	2.2 J
40CFR136A 625	Alpha-Terpineol	mg/L	0.016	NA	ND
	Benzoic acid	mg/L	0.071	NA	ND
	p-Cresol	mg/L	0.014	NA	ND
	Pentachlorophenol	mg/L	0.02	NA	ND
	Phenol	mg/L	0.015	1.0	ND
EPA 200.7 Rev 4.4	Arsenic	mg/L	0.36	0.16854	0.0064 J
	Cadmium	mg/L	0.003	0.0159	ND
	Calcium	mg/L	NA	NA	52
	Iron	mg/L	1	1	**4.5**
	Lead	mg/L	0.029	0.0816	0.0048 J
	Magnesium	mg/L	NA	0.0636	27
	Potassium	mg/L	NA	NA	9.2
	Selenium	mg/L	0.02	0.2385	0.014 J
	Silver	mg/L	0.001	0.0318	ND
	Sodium	mg/L	NA	NA	120
	Zinc	mg/L	0.022	0.117	**0.044**
EPA 245.1	Mercury	mg/L	0.0024	0.0024	0.000049 J
EPA 7196	Hexavalent Chromium	µg/L	16	NA	12 **
EPA 365.1	Phosphorus, Total	mg/L	NA	2.0	0.32 B
MCAWW 350.1	Ammonia	mg/L	4.9	19	0.12 B
MCAWW 353.2	Nitrate-Nitrite as Nitrogen	mg/L	NA	0.68	0.057 J
EPA Total Nitrogen	Nitrogen, Total	mg/L	NA	NA	2.7
EPA 405.1	BOD (5-Day)	mg/L	NA	30	18
MCAWW 410.4	Chemical Oxygen Demand	mg/L	NA	120	85
SM 2540D	Total Suspended Solids	mg/L	100	100	86
MCAWW 300.0A	Bromide	mg/L	NA	NA	1.2
	Chloride	mg/L	NA	860	160
	Sulfate	mg/L	NA	NA	74
SM 2320B	Bicarbonate Alkalinity	mg/L	NA	NA	210
	Carbonate Alkalinity	mg/L	NA	NA	ND
	Total Alkalinity	mg/L	NA	NA	210
Field Method	pH	SU	5.5-8.0	6.0-9.0	7.75

Note:

Bold	exceed screening criteria
ND	not detected above the reporting limits
*	not detected above the method detection limits
**	result after subtracting the 6 ug/L detection in the reagent blank
µg/L	micrograms per liter
mg/L	milligrams per liter
B	compound was found in the blank and sample
BOD	biochemical oxygen demand
HEM	n-hexane extractable material
NA	no limitation at this time
NT	not tested
J	estimated result is less than the reporting limit but greater than or equal to the method detection limit
SU	standard unit